program code for a first communication step of transmitting a result of character recognition at said character recognition step to said central control unit;

program code for a second communication step of receiving the result of character recognition at said character recognition step from said terminal;

program code for a display step for displaying the result of character recognition at said character recognition step, which is received at said second communication step;

program code for an input step of inputting an instruction for performing processing of said result of character recognition; and

program code for a post-processing step for performing post-processing of said result of character recognition on the basis of an input at said input step.

REMARKS

Claims 1-35, 37-40, 42, 44-47, 49 and 51-78 are in the application, with Claims 16-23, 37-40, 42, 44-47 and 49 having been amended, Claims 36, 41, 43, 48 and 50 having been cancelled and Claims 1-15, 25-35 and 51-78 having been withdrawn from consideration. Of the claims currently under consideration, Claims 16, 20 and 24 are the independent claims. Reconsideration and further examination are respectfully requested.

Claims 16, 18-20, 22-24, 36, 43 and 50 were rejected under 35 U.S.C. §103 over U.S. Patent No. 5,982,928 to Shimada in view of U.S. Patent No. 5,802,179 to Yamamoto; Claims 17 and 21 were rejected under 35 U.S.C. §103 over Shimada, Yamamoto and U.S. Patent No. 5,796,863 to Lyon; and Claims 37-42 and 44-49 were

rejected under 35 U.S.C. §103 over Shimada, Yamamoto and U.S. Patent No. 5,848,187 to Bricklin. Reconsideration and withdrawal of the rejections are respectfully requested.

The present invention relates to a communication system that performs communication between a terminal and a central control unit via a network. According to the invention, the terminal reads image data including a manuscript ID, recognizes the manuscript ID from image data, sends the recognized manuscript ID to the central control unit, receives a control signal including information of character recognition conditions from the central control unit and performs character recognition from the image data in accordance with the information of the character recognition condition. The control unit receives a manuscript ID from the terminal, obtains the information of character recognition condition according to the received manuscript ID and sends the control signal including the obtained information of character recognition condition to the terminal.

According to the invention of Claim 16, a communication system performs communication between a terminal and a central control unit. The terminal includes read means for reading a manuscript, including a manuscript ID as image data, manuscript ID recognition means for recognizing the manuscript ID from the image data, first transmitting means for transmitting the recognized manuscript ID to the central control unit, first receiving means for receiving a control signal from the central control unit, the control signal including an information of character recognizing condition according to the transmitted manuscript ID, and character recognition means for performing character recognition from the image data in accordance with the information of character recognizing condition included with the control signal. According to the invention of Claim 16, the central control unit includes second receiving means for receiving the

manuscript ID transmitted from the terminal, obtaining means for obtaining the information of character recognizing condition according to the received manuscript ID, and second transmitting means for transmitting the control signal including the obtained information of character recognizing condition to the terminal.

The applied art of record is not understood to disclose or to suggest the features of Claim 16. In this regard, Shimada discloses performing cooperation-process of terminals connected to each other via a network. Specifically, a first handwritten data input from terminal 5 and a second handwritten data input from terminal 7 are transmitted to the host terminal. Thereafter, first and second handwritten data are displayed in window 31 and window 32 in Figure 3A, respectively, by the host terminal. Thus, data to be transmitted to the host terminal is image data. The host terminal edits contents from windows 31 and 32 in an edit window in Figure 3B. When character recognition command is input, as shown in Figure 4A, the host terminal transmits each of the first and second handwritten data to corresponding terminals 5 and 7 at which point character recognitions are performed by each terminals 5 and 7 and the host terminal receives and displays the character recognition results in each of the terminals as shown in Figure 4B. As such, Shimada simply transfers image data from a terminal to a host terminal and does not transfer a manuscript ID showing a kind of manuscript from the terminal to the host terminal.

Yamamoto is not understood to disclose anything which would make up for the deficiencies of Shimada. In this regard, Yamamoto discloses a technique for reproducing sound data using two-dimensional barcode information. As shown in Figure 2 of Yamamoto, field A in a print sheet 30 describes position information of sound

information printed on print sheet 30 by a two-dimensional barcode. By scanning the print sheet 30 including the two-dimensional barcode information, Yamamoto's processor reproduces sound information indicated by the two-dimensional barcode on print sheet 30. As one can readily understand, Yamamoto is a single device which does not perform data transfer to other devices. Yamamoto simply reads position information of sound information printed on a print sheet and reproduces the sound information according to the position information. Accordingly, any combination of Shimada and Yamamoto would fail to render obvious the invention of Claim 16. Moreover, since the technical field of Yamamoto differs greatly from that of Shimada, one of ordinary skill in the art would not look to Yamamoto to modify Shimada. Accordingly, Claim 16 is believed to be allowable over any permissible combination of Shimada and Yamamoto.

Claims 20 and 24 are method and computer-readable memory claims, respectively, corresponding to Claim 16 and are believed to be allowable for the same reasons given above.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

_____
Attorney for Applicant

Registration No. _36,174_

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-2200
Facsimile: (212) 218-2200

CA_MAIN 31989 v 1

- 33 -

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

16. (Twice Amended) A communication system that performs communication between a terminal and a central control unit, said terminal comprising:

read means for reading a manuscript, including a manuscript ID [showing recognition position information of recognition areas in a specific read manuscript,] as image data;

manuscript ID recognition means for recognizing the manuscript ID from the image data;

first transmitting means for transmitting the recognized manuscript ID to said central control unit;

first receiving means for receiving a control signal from the central control unit, the control signal including an information of character recognizing condition according to the transmitted manuscript ID; and

character recognition means for performing character recognition from the image data in accordance with the information of character recognizing condition included with the control signal;

[storage means for storing a recognition dictionary group whose members each correspond to each attribute of the image data;

-i-

character recognition means for performing character recognition from the image

data, read by said read means, with selecting a recognition dictionary, based on a control signal,

from the recognition dictionary group, stored in said storage means;

manuscript ID recognition means for recognizing said manuscript ID from said

image data; and

first communication means for transmitting a result of character recognition in

said character recognition means and a result of manuscript ID recognition in said manuscript ID

recognition means to said central control unit or receiving said control signal from the central

control unit;]

said central control unit comprising:

second [communication] <u>receiving</u> means for receiving [the result of character

recognition in said character recognition means and] the [result of] manuscript ID <u>transmitted</u>

[recognition in said manuscript ID recognition means] from said terminal [or transmitting said

control signal to the terminal]; [and]

<u>obtaining means for obtaining the information of character recognizing condition</u>

<u>according to the received manuscript ID; and</u>

<u>second transmitting means for transmitting the control signal including the</u>

<u>obtained information of character recognizing condition to said terminal</u>

[control means for controlling said control signal on the basis of the result of

manuscript ID recognition in said manuscript ID recognition means, which said second

communication means receives].

17. (Amended) The communication system according to claim 16, wherein said character recognition means determines recognition candidate characters corresponding to said image data [with using a recognition dictionary based on said] in accordance with the information of character recognition condition included with the control signal and outputs a predetermined number of recognition candidate characters in the order according to largeness of similarity of the recognition candidate characters.

18. (Twice Amended) The communication system according to claim 16, wherein said [control means comprises] central control unit further comprising a database for managing said control signal for [each type of a manuscript that is represented by a] the information of character recognizing condition corresponding to the manuscript ID, wherein said obtaining means [and] obtains from said database [a] the control signal corresponding to [a] the received manuscript ID [shown by the result of manuscript ID recognition in said manuscript ID recognition means].

19. (Amended) The communication system according to claim 16, wherein [said control signal] the information of character recognizing condition includes positional information, showing each of plural recognition area in said image data, and recognition dictionary information showing a recognition dictionary used for recognition in each recognition area.

20. (Twice Amended) A control method for a communication system that performs communication between a terminal and a central control unit, said control method comprising:

a read step of reading a manuscript, including a manuscript ID [showing recognition position information of recognition areas in a specific read manuscript,] as image data;

a manuscript ID recognition step for recognizing the manuscript ID from the image data;

a first transmitting step for transmitting the recognized manuscript ID to said central control unit;

a first receiving step for receiving a control signal from the central control unit, the control signal having an information of character recognizing condition according to the transmitted manuscript ID;

a character recognition step for performing character recognition from the image data in accordance with the information of character recognizing condition included with the control signal;

[a character recognition step of performing character recognition from image data, read at said read step, with selecting a recognition dictionary, based on a control signal, from a recognition dictionary group whose members each correspond to each attribute of the image data;

a manuscript ID recognition step of recognizing said manuscript ID from said image data;

-iv-

a first communication step of transmitting a result of character recognition at said

character recognition step and a result of manuscript ID recognition at said manuscript ID

recognition step to said central control unit or receiving said control signal from the central

control unit;]

a second [communication] <u>receiving</u> step of receiving [the result of character

recognition at said character recognition step and] the [result of] manuscript ID <u>transmitted</u>

[recognition at said manuscript ID recognition step] from said terminal [or transmitting said

control signal to the terminal]; [and]

<u>an obtaining step for obtaining the information of character recognizing condition</u>

<u>according to the received manuscript ID; and</u>

<u>second transmitting means for transmitting the control signal including the</u>

<u>obtained information of character recognizing condition to said terminal</u>

[a control step of controlling said control signal on the basis of the result of

manuscript ID recognition at said manuscript ID recognition step, which said second

communication step receives].

21. (Amended) The control method for a communication system according to

claim 20, wherein said character recognition step determines recognition candidate characters to

said image data [with using a recognition dictionary based on said] <u>in accordance with the</u>

<u>information of character recognition condition included with the</u> control signal and outputs a

predetermined number of recognition candidate characters in the order according to largeness of

similarity of the recognition candidate characters.

22. (Twice Amended) The control method for a communication system

according to claim 20, wherein said <u>central control unit further comprising</u> [control step obtains

from] a database <u>for managing said</u> [a] control signal <u>for the information of character recognizing</u>

<u>condition</u> corresponding to [a] <u>the</u> manuscript ID<u>, wherein said obtaining step obtains from said</u>

<u>database the control signal corresponding to the received manuscript ID</u> [shown by the result of

manuscript ID recognition at said manuscript ID recognition step].

23. (Amended) The control method for a communication system according to

claim 20, wherein [said control signal] <u>the information of character recognizing condition</u>

includes positional information, showing each of plural recognition area in said image data, and

recognition dictionary information showing a recognition dictionary used for recognition in each

recognition area.

36. (Cancelled)

37. (Amended) The communication system according to claim [36] <u>16</u>, wherein

said character recognition means <u>performs character recognition from the image data</u> [comprises

judging means that outputs a recognition candidate character corresponding to said image data

with using a recognition dictionary] and judges on the basis of <u>threshold information included in</u>

<u>the information of character recognizing condition</u> [said control signal] whether [said] <u>the</u>

recognition candidate character <u>included the result of character recognition</u> is unrecognizable[,

and

wherein said character recognition means] <u>and</u> outputs the <u>recognition candidate</u>

<u>character judged as recognizable</u> [result of character recognition on the basis of a judgement

result of said judging means].

38. (Amended) The communication system according to claim 37, wherein said

[judging] <u>character recognition</u> means judges whether said recognition candidate character

<u>included the result of character recognition</u> is unrecognizable, by comparing [said control signal]

<u>the threshold information</u> with similarity of said recognition candidate character.

39. (Amended) The communication system according to claim [37] <u>38</u>, wherein

said [judging] <u>character recognition</u> means judges that [said image data] <u>the recognition</u>

<u>candidate character</u> is unrecognizable, if [a value shown by said control signal] <u>the threshold</u>

<u>information</u> is larger than the similarity of said recognition candidate character.

40. (Amended) The communication system according to claim [39] <u>37</u>, wherein

said character recognition means outputs a predetermined code showing unrecognizableness [as a

recognition result of said recognition candidate character if] when all of the recognition candidate

character is judged as unrecognizable character [as a result of judgement of said judging means].

41. (Cancelled)

42. (Twice Amended) The communication system according to claim [36] 18,

wherein [said control signal] the information of character recognizing condition includes

positional information, showing each of plural recognition area in said [manuscript] image, and

[a] threshold information for judgement of unrecognizableness in each recognition area.

43. (Cancelled)

44. (Amended) The control method for a communication system according to

claim [43] 20, wherein said character recognition step performs character recognition from the

image data [comprises a judging step of outputting a recognition candidate character

corresponding to said image data with using a recognition dictionary] and judging on the basis of

threshold information included in the information of character recognizing condition [said

control signal] whether [said] the image data included the result of character recognition is

unrecognizable[, and

wherein said character recognition step] and outputs the recognition candidate character judged as recognizable [result of character recognition on the basis of a judgement result at said judging step].

45. (Amended) The control method for a communication system according to claim 44, wherein said [judging] character recognition step judges whether said image data included the result of character recognition is unrecognizable, by comparing [said control signal] the threshold information with similarity of said recognition candidate character.

46. (Amended) The control method for a communication system according to claim [44] 45, wherein said [judging] character recognition step judges that [said image data] the recognition candidate character is unrecognizable, if [a value shown by said control signal] the threshold information is larger than the similarity of said recognition candidate character.

47. (Amended) The control method for a communication system according to claim [46] 44, wherein said character recognition step outputs a predetermined code showing unrecognizableness [as a recognition result of said recognition candidate character, if] when all of said image data is judged as unrecognizable character [as a result of judgement at said judging step].

48. (Cancelled)

49. (Amended) The control method for a communication system according to claim [43] 22, wherein [said control signal] the information of character recognizing condition includes positional information, showing each of plural recognition area in said [manuscript] image, and [a] threshold information for judgement of unrecognizableness in each recognition area.

50. (Cancelled)